



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION:	CF34-10E5	BYPASS RATIO:	5.1
UNIQUE ID NUMBER:	10GE129	PRESSURE RATIO (π_{co}):	25.6
COMBUSTOR:	2253M21		
ENGINE TYPE:	TF	RATED THRUST (F_{oo}) (kN):	77.4

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F _{oo} (g/kN) or SN	16.9	107.3	42.5	14.6
AS % OF ORIGINAL LIMIT	86.2	90.9	46.6	57.5
AS % OF CAEP/2 LIMIT (NO _x)			58.3	
AS % OF CAEP/4 LIMIT (NO _x)			68.1	
AS % OF CAEP/6 LIMIT (NO _x)			75.2	
AS % OF CAEP/8 LIMIT (NO _x)			87.4	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F _{oo})	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	0.789	0.05	0.59	18.66	11.3
CLIMB OUT	85	2.2	0.650	0.08	0.35	15.54	5.2
APPROACH	30	4.0	0.221	0.14	3.77	8.08	0.1
IDLE	7	26.0	0.084	6.39	49.98	3.51	0.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			303	848	6761	2836	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F _{oo} (g/kN) or AVERAGE SN (MAX)				11.0	87.4	36.7	11.3
SIGMA (D _p /F _{oo} in g/kN, or SN)				0.6	1.9	0.4	0.6
RANGE (D _p /F _{oo} in g/kN, or SN)				10.3-11.4	85.7-89.4	36.2-37	10.8-12

ACCESSORY LOADS

POWER EXTRACTION	0	(kW)	AT	All	POWER SETTINGS
STAGE BLEED	0	(% CORE FLOW)	AT	All	POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.2-97.9
TEMPERATURE (K)	296-300
ABS HUMIDITY (kg/kg)	0.0099-0.0127

FUEL

SPEC	Jet A-1
H/C	1.92
AROM (%)	16.3-17.4

MANUFACTURER: General Electric Company
 TEST ORGANIZATION: Peebles Test Operation
 TEST LOCATION: Site 4D
 TEST DATES: 05/09/2006-10/09/2006

NO_x REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
x	2.3.2 e) (CAEP/8)

REMARKS

- GE Report R2006AE716
- Block 2 Engines
- Engine 994-251/1
- Engines with 2253M21 combustor produced beginning August 2007
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO_x levels in accordance with Part III, Chapter 2, 2.3.2 e)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)